Palisades Nuclear Plant





July 7, 2006

10 CFR 50.73(a)(2)(i)(B) 10 CFR 50.73(a)(2)(iv)(A)

U. S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, DC 20555-0001

Palisades Nuclear Plant Docket 50-255 License No. DPR-20

## Licensee Event Report 06-005, Uncoupled Control Rod

Licensee Event Report (LER) 06-005 is enclosed. The LER describes the discovery that a control rod had remained uncoupled following a scheduled refueling outage, which is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as operation which was prohibited by Technical Specifications. The LER also describes an associated manual actuation of the reactor protection system that occurred during the subsequent plant shutdown that had been initiated to correct the condition. The actuation is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A).

### **Summary of Commitments**

This letter contains no new commitments and no revisions to existing commitments.

Paul A. Harden

Site Vice President, Palisades Nuclear Plant

Nuclear Management Company, LLC

Enclosure (1)

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

## **ENCLOSURE 1**

## LER 06-005, Uncoupled Control Rod

MANU-FA CTURER

COMPONENT

HTMOM

REPORTABLE

TO EPIX

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION (6-2004)					ION	APPROVED BY OMB NO. 3150-0104 EXPIRES 6-30-2007  Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry.							
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FACILITY NAM	ME (1)						DOCKE	TNUMBER	R (2)		PAGE (3)		
Palisades Nuclear Plant						05000-255				1 of 3			
TITLE (4) Uncoup	led Cor	ntrol Ro											
EV	ENT DATE (	i)	L	ER NUMBER (6)	1	RE	PORT D	ATE (7)		1,111,511	ACILITIES INVOLVED (8)		
QM	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV	MQ	DAY	YEAR	FA	CILITY NAME	DOCKET NUMBER		
05	10	2006	2006	005	00	07	07	2006	FA	CILITY NAME	DOCKET NUMBER		
OPER/	TING	-		THIS REPORT	S SUBI	AIT FED	PURSU	ANT TO TH	HE RI	EQUIREMENTS OF 10	CFR : (Chack all that apply) (11)		
MODE (9)		1	20.2201(b) 20			20.22	2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)		
POWER LEVEL (10)		022	20.2201(d)			20.22	20.2203(a)(4)			50.73(a)(2)(iii)	50.73(a)(2)(x)		
		422	20.2	20.2203(a)(1) 50			36(c)(1)(l)(A)		X	50.73(a)(2)(iv)(A)	73.71(a)(4)		
							50,36(c)(1)(ii)(A)			50.73(a)(2)(v)(A)	73.71(a)(5)		
			20.2	2203(a)(2)(ii)		50.36	5(c)(2)			50.73(a)(2)(v)(B)	OTHER		
			20.3	2203(a)(2)(iii)		50.46	6(a)(3)(ii	)		50,73(a)(2)(v)(C)	Specify in Abstract belo	w or in	
			20.2	2203(a)(2)(iv)		50.73	3(a)(2)(i)	(A)		50.73(a)(2)(v)(D)	NRC Form 366A		
				2203(a)(2)(v)	X	_	3(a)(2)(i)	_	_	50.73(a)(2)(vii)			
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				LICI	ENSEE	CON	TACT F	OR THIS	-				
NAME									TE	LEPHONE NUMBER (In	clude Area Code)		

# YES (If yes, complete EXPECTED SUBMISSION DATE). ABSTRACT

CAUSE

On May 10, 2006, an unexpected quadrant power tilt was identified during reactor core startup physics testing. At the time of discovery, plant power was being maintained at approximately 22% following initial power ascension from a recently completed refueling outage. Subsequent analysis determined the most probable cause of the quadrant power tilt to be Control Rod 33 fully inserted into the core as opposed to being fully withdrawn as indicated. A shutdown was initiated to facilitate further troubleshooting. The reactor was manually tripped from approximately 11% power.

X NO

CAUSE

SYSTEM

EXPECTED

SUBMISSION

**DATE (15)** 

REPORTABLE

MANU-

SUPPLEMENTAL REPORT EXPECTED (14)

COMPONENT

SYSTEM

On May 13, 2006, investigation determined that Control Rod 33 was uncoupled from its drive assembly, having not been successfully coupled during the refueling outage. Consequently, Control Rod 33 had remained fully inserted into the core throughout plant startup from the refueling outage.

Prior to discovery, the upward mode changes into Mode 2 and Mode 1 that occurred on May 9 and May 10, 2006, respectively, were performed in violation of Technical Specification (TS) 3.0.4, since the intent of TS 3.1.4.D.1 is to prevent a reactor startup with an immovable control rod. Consequently, this event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as operation which was prohibited by Technical Specifications. In addition, the manual reactor protection system actuation is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A).

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## LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)		PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 3
Palisades Nuclear Plant	05000-255	2006	005	00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

#### **EVENT DESCRIPTION**

On May 10, 2006, an unexpected quadrant power tilt was identified during reactor [RCT;AB] core startup physics testing. At the time of discovery, plant power was being maintained at approximately 22% following initial power ascension from a recently completed refueling outage. On May 11, 2006, subsequent analysis of core power distribution data determined the most probable cause of the quadrant power tilt to be Control Rod 33 [ROD;AA] fully inserted into the core as opposed to being fully withdrawn as indicated.

Based on this conclusion, Off Normal Procedure ONP-5.1, "Control Rod Drop" was conservatively entered and a shutdown to Mode 5 was initiated to facilitate further troubleshooting. The reactor was manually tripped from approximately 11% power in accordance with procedural guidance.

On May 13, 2006, investigation determined that Control Rod 33 was uncoupled from its drive assembly, having not been successfully coupled during the refueling outage. Consequently, Control Rod 33 had remained fully inserted into the core throughout plant startup from the refueling outage.

Prior to discovery, the upward mode changes into Mode 2 and Mode 1 that occurred on May 9 and May 10, 2006, respectively, were performed in violation of Technical Specification (TS) 3.0.4, since the intent of TS 3.1.4.D.1 is to prevent a reactor startup with an immovable control rod. Consequently, this event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as operation which was prohibited by Technical Specifications. In addition, the manual reactor protection system [JC] actuation is reportable in accordance with 10 CFR 50.73(a)(2)(iv)(A).

#### CAUSE OF THE EVENT

The failure to couple Control Rod 33 involved deficiencies in performance of the coupling procedure, as well as deficiencies in verification and oversight of the activity.

#### CORRECTIVE ACTIONS

Control Rod 33 was coupled to its drive assembly.

The activity of coupling control rods will be strengthened through a combination of procedural enhancements, personnel qualification improvements, and additional administrative controls.

## LICENSEE EVENT REPORT (LER)

**TEXT CONTINUATION** 

FACILITY NAME (1)	DOCKET NUMBER (2)		PAGE (3)		
		YEAR SEQUENTIAL NUMBER		REVISION NUMBER	3 of 3
Palisades Nuclear Plant	05000-255	2006	- 005 -	00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

#### SAFETY SIGNIFICANCE

The safety significance of this occurrence is considered minimal. Since the inserted control rod was identified prior to exceeding 25% power, TS required actions for one misaligned and immovable control rod were already satisfied without further action.

For the manual reactor trip, the reactor protection system functioned as expected.

This event does not involve a safety system functional failure.

PREVIOUS SIMILAR EVENTS

None